FILE 'REGISTRY' ENTERED AT 10:24:[redacted]ON 12 JUL 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 11 JUL 2003 HIGHEST RN 546834-22-4
DICTIONARY FILE UPDATES: 11 JUL 2003 HIGHEST RN 546834-22-4

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> s lentinan/cn
L1 1 LENTINAN/CN

=> d l1 1 ibib abs
'IBIB' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'
'ABS' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:

Substance information can be displayed by requesting individual
fields or predefined formats. The predefined substance formats
are: (RN = CAS Registry Number)

REG - RN
SAM - Index Name, MF, and structure - no RN
FIDE - All substance data, except sequence data
IDE - FIDE, but only 50 names
SQIDE - IDE, plus sequence data
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used
SQD - Protein sequence data, includes RN
SQD3 - Same as SQD, but 3-letter amino acid codes are used
SQN - Protein sequence name information, includes RN

CALC - Table of calculated properties
EPROP - Table of experimental properties
PROP - EPROP and CALC

Any CA File format may be combined with any substance format to
obtain CA references citing the substance. The substance formats
must be cited first. The CA File predefined formats are:

ABS -- Abstract
APPS -- Application and Priority Information
BIB -- CA Accession Number, plus Bibliographic Data
CAN -- CA Accession Number
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)
IND -- Index Data
IPC -- International Patent Classification
PATS -- PI, SO
STD -- BIB, IPC, and NCL

IABS --ABS, indented, with text labels
IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when
it is available.

The MAX format is the same as ALL.
The IALL format is the same as ALL with BIB ABS and IND indented,
with text labels.

For additional information, please consult the following help
messages:

HELP DFIELDS -- To see a complete list of individual display fields.
HELP FORMATS -- To see detailed descriptions of the predefined formats.
ENTER DISPLAY FORMAT (IDE):d l1 1
'D' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'
'L1' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'
'1' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:

Substance information can be displayed by requesting individual
fields or predefined formats. The predefined substance formats
are: (RN = CAS Registry Number)

REG - RN
SAM - Index Name, MF, and structure - no RN
FIDE - All substance data, except sequence data
IDE - FIDE, but only 50 names
SQIDE - IDE, plus sequence data
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used
SQD - Protein sequence data, includes RN
SQD3 - Same as SQD, but 3-letter amino acid codes are used
SQN - Protein sequence name information, includes RN

CALC - Table of calculated properties
EPROP - Table of experimental properties
PROP - EPROP and CALC

Any CA File format may be combined with any substance format to
obtain CA references citing the substance. The substance formats
must be cited first. The CA File predefined formats are:

ABS -- Abstract
APPS -- Application and Priority Information
BIB -- CA Accession Number, plus Bibliographic Data
CAN -- CA Accession Number
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)
IND -- Index Data
IPC -- International Patent Classification
PATS -- PI, SO
STD -- BIB, IPC, and NCL

IABS --ABS, indented, with text labels
IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when
it is available.
The MAX format is the same as ALL.
The IALL format is the same as ALL with BIB ABS and IND indented,
with text labels.

For additional information, please consult the following help
messages:

HELP DFIELDS -- To see a complete list of individual display fields.
HELP FORMATS -- To see detailed descriptions of the predefined formats.
ENTER DISPLAY FORMAT (IDE):all

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS
RN 37339-90-5 REGISTRY
CN ***Lentinan (9CI)*** (CA INDEX NAME)
OTHER NAMES:
CN Biomoduline
CN LC 33

ENTE A polysaccharide of Lentinus edodes used as an immuno-accelerator
MF Unspecified
CI PMS, COM, MAN
PCT Manual registration
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CBNB, CHEMCATS, CIN, DDFU, DRUGU, EMBASE, IPA, MEDLINE, MRCK*, NAPRALERT, PHAR, PROMT, RTECS*, TOXCENTER, USPATFULL, VETU
(*File contains numerically searchable property data)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
443 REFERENCES IN FILE CA (1957 TO DATE)
16 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
443 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1

AN 139:12302 CA
TI Laminaria polysaccharides for therapeutical treatments
IN Yvin, Jean-Claude; Vetvicka, Vaclav
PA Laboratoires Goeemar S.A., Fr.
SO PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K035-80
ICS A61K031-716; A61P031-04; A61P031-10; A61P031-12; A61P037-04; A61P035-00
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003045414	A2	20030605	WO 2002-EP13512	20021129
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003119780	A1	20030626	US 2001-999202	20011130
PRAI	US 2001-999202		20011130		

AB A therapeutical method comprises administration to a patient of an effective amt. of esp. sol. laminarin for the treatment of tumors and more generally of cancers of the group comprising breast cancer, lung cancer, esophagus cancer, stomach cancer, intestine and colon cancers, and for the treatment of viral, bacterial and fungal diseases as well as diseases related to immunostimulant deficiencies of human beings and warm-blood animals.
ST antitumor antiinfective immunostimulant laminarin
IT Infection
(bacterial; laminarin for treatment of tumors and infections and immunodeficiencies)
IT Intestine, neoplasm
(colon; laminarin for treatment of tumors and infections and immunodeficiencies)
IT Drug delivery systems
(granules; laminarin for treatment of tumors and infections and immunodeficiencies)
IT Antimicrobial agents
Antitumor agents
Esophagus, neoplasm
Human
Immunodeficiency
Immunostimulants
Intestine, neoplasm
Laminaria saccharina
Lung, neoplasm
Mammary gland, neoplasm
Mouthwashes
Mycosis
Stomach, neoplasm

(laminarin for treatment of tumors and infections and immunodeficiencies)
IT Drug delivery systems
(lozenges; laminarin for treatment of tumors and infections and immunodeficiencies)
IT Drug delivery systems
(nasal sprays; laminarin for treatment of tumors and infections and immunodeficiencies)
IT Lymphocyte
(natural killer cell, stimulation by; laminarin for treatment of tumors and infections and immunodeficiencies)
IT Drug delivery systems
(parenterals; laminarin for treatment of tumors and infections and immunodeficiencies)
IT Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(prodn. stimulation by; laminarin for treatment of tumors and infections and immunodeficiencies)
IT Drug delivery systems
(tablets; laminarin for treatment of tumors and infections and immunodeficiencies)
IT Drug delivery systems
(vaginal; laminarin for treatment of tumors and infections and immunodeficiencies)
IT Infection
(viral; laminarin for treatment of tumors and infections and immunodeficiencies)
IT 9008-22-4P, Laminarin 37339-90-5P, Lentinan
RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(laminarin for treatment of tumors and infections and immunodeficiencies)

REFERENCE 2

AN 138:400474 CA
TI Optimum nitrogen source for Lentinus edodes fermentation and purification of lentinan
AU Teng, Li-rong; Meng, Qing-fan; Chen, Jia; Qin, Yi; Xu, Yue-chi; Wu, Lei; Liu, Lan-ying
CS College of Life Science, Jilin University, Changchun, 130023, Peop. Rep. China
SO Jilin Daxue Xuebao, Lixueban (2003), 41(1), 102-105
CODEN: JDXLAW; ISSN: 1671-5489
PB Jilin Daxue Xuebao, Lixueban Bianjibu
DT Journal
LA Chinese
CC 16-4 (Fermentation and Bioindustrial Chemistry)
Section cross-reference(s): 10
AB Orthogonal design was used to explore the optimum org. nitrogen sources for Lentinus edodes fermn. and the best ratio of the three nitrogen sources in the medium is bean powder 1, yeast ext. paste 1.5, and tryptone 0.2. The results also indicate that bean powder is the best nitrogen source for Lentinus edodes fermn. Subsequently, Lentinus edodes was cultured in the optimum medium for 130 h and the concn. of lentinan in the fermn. medium could reach the climax of 25.1 mg/mL. lentinan was crudely extd. from the liq. medium by alc. pptn., then deproteinized by the Sevag method from the polysaccharides and the deproteinized lentinan was purified by gel filtration with Sephadex G-75 to obtain two components of lentinan.
ST Lentinus lentinan fermn purifn
IT Experimental design
Fermentation
Lentinula edodes
Nitrogen sources, microbial
(optimum nitrogen source for Lentinus edodes fermn. and purifn. of lentinan)
IT 37339-90-5P, Lentinan
RL: BPN (Biosynthetic preparation); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)
(optimum nitrogen source for Lentinus edodes fermn. and purifn. of lentinan)

REFERENCE 3

AN 138:362354 CA

TI Effects of intraperitoneal and intranasal application of Lentinan on cellular response in rats
AU Markova, Nadya; Kussovski, Vesselin; Radoucheva, Tatyana; Dilova, Krasimira; Georgieva, Neli
CS Institute of Microbiology, Department of Pathogenic Bacteria, Bulgarian Academy of Sciences, Sofia, 1113, Bulg.
SO International Immunopharmacology (2002), 2(12), 1641-1645
CODEN: IINMBA; ISSN: 1567-5769
PB Elsevier Science B.V.
DT Journal
LA English
CC 1-7 (Pharmacology)
Section cross-reference(s): 63
AB Lentinan (Ajinomoto, Japan) was administrated i.p. and intranasally (i.n.) at different doses (1, 5, and 10 mg/kg) to rats. Effectiveness of Lentinan treatment was evaluated by comparative testing of cell activation (establishing the no., glycolytic and acid phosphatase activity, H2O2 prodn. and killing ability against Salmonella enteritidis and Staphylococcus aureus) at 2 different compartments-peritoneal and broncho-alveolar cavities. The results indicated that Lentinan induced high-grade activation of peritoneal cells (PCs) and esp. of broncho-alveolar cells (BACs) with markedly enhanced effector function (killing ability against S. aureus). Generally, Lentinan, known usually with its parenteral routes of application, can be successful to stimulate the host cell response in the respiratory tract by intranasal route of administration.
ST lentinan immunostimulant peritoneum lung alveolus macrophage
IT Macrophage
(activation; i.p. and intranasal application of Lentinan on cellular response in rats)
IT Lung
(alveolus, macrophage; i.p. and intranasal application of Lentinan on cellular response in rats)
IT Anti-inflammatory agents
Immunostimulants
Peritoneum
Respiratory tract
(i.p. and intranasal application of Lentinan on cellular response in rats)
IT 37339-90-5, Lentinan
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(i.p. and intranasal application of Lentinan on cellular response in rats)
RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
(1) Chihara, G; Dev Biol Stand 1992, V77, P191 MEDLINE
(2) Chihara, G; Nature 1969, V222, P687 CAPLUS
(3) Chihara, G; Nature 1970, V225, P943 CAPLUS
(4) Cropz, J; Proc Natl Acad Sci U S A 1985, V82, P2751
(5) Dennert, G; J Natl Cancer Inst 1973, V51, P1727 CAPLUS
(6) Irinoda, K; Int J Immunopharmacol 1992, V14, P971 CAPLUS
(7) Jong, S; Adv Appl Microbiol 1993, V39, P153 CAPLUS
(8) Kanai, K; Manipulation of host defense mechanisms 1981, V82, P65
(9) Kaneko, Y; Microbial infections 1992, V39, P201
(10) Maeda, Y; Immunomodulatory agents from plants 1999, P203 CAPLUS
(11) Maeda, Y; Nature 1971, V229, P634 CAPLUS
(12) Oka, M; Int J Immunopharmacol 1996, V18, P211 CAPLUS
(13) Pick, E; J Immunol Methods 1980, V38, P161 CAPLUS
(14) Radoucheva, T; Zentralbl Bakteriol, Mikrobiol Hyg, Abt 1, Orig A 1976, V235, P404
(15) Radoucheva, T; Zentralbl Bakteriol, Mikrobiol Hyg, Abt 1, Orig A 1976, V235, P408
(16) Vissar, L; Infect Immun 1995, V63, P2570

REFERENCE 4

AN 138:243251 CA
TI Linggu Yiyuan nutrient and preparing thereof
IN Yang, Shuhua
PA Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
IC ICM A61K031-715
ICS A61P001-14; A23L001-30
CC 63-5 (Pharmaceuticals)

Section cross-reference(s): 15

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1352946	A	20020612	CN 2000-132201	20001110

PRAI CN 2000-132201 20001110

AB The nutrient is composed of sol. pachyman 1-2, lentinan 1- 2, maltodextrin (DE of 5-10%) 95-97, stevioside 0.3-0.5, and vanillin 0.08-0.3%.

ST pachyman lentinan nutrient

IT Natural products
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(Linggu Yiyuan; prepn. of Linggu Yiyuan nutrient)

IT Nutrients
(prepn. of Linggu Yiyuan nutrient)

IT 121-33-5, Vanillin 9037-88-1, Pachyman 9050-36-6, Maltodextrin 37339-90-5, Lentinan 57817-89-7, Stevioside
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(prepn. of Linggu Yiyuan nutrient)

REFERENCE 5

AN 138:220458 CA

TI Production of fungal extracellular immune stimulating compounds

IN Kristiansen, Bjoern

PA Medimush Aps, Norway

SO PCT Int. Appl., 29 pp.
CODEN: PIXXD2

DT Patent

LA English

IC ICM C12P019-00

CC 16-2 (Fermentation and Bioindustrial Chemistry)
Section cross-reference(s): 15

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003020944	A2	20030313	WO 2002-IB3557	20020903

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI NO 2001-4256 20010903

AB A process is described for the prodn. of an immunostimulant by submerged cultivation of in which mycelium from agar plates or a fermn. broth is added to a liq. medium in a shake flask or a bioreactor contg. nutrients such as malt ext., yeast ext., peptone, and glucose having access to air or to which air is added, and which is kept in const. movement at .apprx.28.degree.. At the proper conditions, there will be an increase in the prodn. of extracellular lentinan, which is shown to be a better immunostimulant than intracellular lentinan. The extracellular product is pptd. from the growth medium by means of methods for the pptn. of microbial polysaccharide.

ST immune stimulant fermn fungi

IT Natural products, pharmaceutical
RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(Lingzhi; prodn. of fungal extracellular immune stimulating compds.)

IT Fermentation
Fungi
Grifola frondosa
Immunostimulants
Lentinula edodes
Schizophyllum commune
Trametes versicolor
(prodn. of fungal extracellular immune stimulating compds.)

IT Glycoproteins
RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL

(Biological study); PREP (Preparation)
(prodn. of fungal extracellular immune stimulating compds.)
IT 9050-67-3P, Schizophyllan 37339-90-5P, Lentinan 104074-36-4P, Grifolan
RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(prodn. of fungal extracellular immune stimulating compds.)

REFERENCE 6

AN 138:147300 CA
TI Suppressive effect of polysaccharides from the edible and medicinal mushrooms, Lentinus edodes and Agaricus blazei, on the expression of cytochrome P450s in mice
AU Hashimoto, Takashi; Nonaka, Yuji; Minato, Ken-Ichiro; Kawakami, Sachiko; Mizuno, Masashi; Fukuda, Itsuko; Kanazawa, Kazuki; Ashida, Hitoshi
CS Division of Life Science, Graduate School of Science and Technology, Kobe University, Kobe, 657-8501, Japan
SO Bioscience, Biotechnology, and Biochemistry (2002), 66(7), 1610-1614
CODEN: BBBIEJ; ISSN: 0916-8451
PB Japan Society for Bioscience, Biotechnology, and Agrochemistry
DT Journal
LA English
CC 1-6 (Pharmacology)
AB To investigate the effects of lentinan from Lentinas edodes and polysaccharides from Agaricus blazei (ABPS) on the expression of cytochrome P450s (CYPs), lentinan (10 mg/kg/day) or ABPS (200 mg/kg/day) was administered to female BALB/c mice four times every other day by i.p. injection. Lentinan and ABPS suppressed both the constitutive and 3-methylcholanthrene-induced CYP1A expression and ethoxyresorufin-O-deethylation activity in the liver.
ST polysaccharide Lentinus Agaricus cytochrome P4501A expression
IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(AP-1 (activator protein 1); effect of polysaccharides from edible and medicinal mushrooms, Lentinus edodes and Agaricus blazei, on expression of cytochrome P450s in mice)
IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(NF-.kappa.B (nuclear factor of .kappa. light chain gene enhancer in B-cells); effect of polysaccharides from edible and medicinal mushrooms, Lentinus edodes and Agaricus blazei, on expression of cytochrome P450s in mice)
IT Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(TNF-.alpha.; effect of polysaccharides from edible and medicinal mushrooms, Lentinus edodes and Agaricus blazei, on expression of cytochrome P450s in mice)
IT Genetic element
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(XRE (xenobiotic-responsive element); effect of polysaccharides from edible and medicinal mushrooms, Lentinus edodes and Agaricus blazei, on expression of cytochrome P450s in mice)
IT Agaricus blazei
Lentinus
(effect of polysaccharides from edible and medicinal mushrooms, Lentinus edodes and Agaricus blazei, on expression of cytochrome P450s in mice)
IT Natural products, pharmaceutical
Polysaccharides, biological studies
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); BIOL (Biological study); OCCU (Occurrence)
(effect of polysaccharides from edible and medicinal mushrooms, Lentinus edodes and Agaricus blazei, on expression of cytochrome P450s in mice)
IT 10102-43-9, Nitrogen oxide (NO), biological studies 332859-78-6, Cytochrome P 450 1A
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(effect of polysaccharides from edible and medicinal mushrooms, Lentinus edodes and Agaricus blazei, on expression of cytochrome P450s in mice)
IT 37339-90-5, Lentinan
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); BIOL (Biological study); OCCU (Occurrence)
(effect of polysaccharides from edible and medicinal mushrooms, Lentinus edodes and Agaricus blazei, on expression of cytochrome P450s in mice)
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD

(1) Abdel-Razzak, Z; Mol Pharmacol 1994, V46, P1100 CAPLUS
(2) Abel, G; Int J Immunopharmacol 1989, V11, P615 CAPLUS
(3) Ashida, H; FEBS Lett 2000, V476, P213 CAPLUS
(4) Ashida, H; Toxicol Appl Pharmacol 2001, V177, P59 CAPLUS
(5) Borchers, A; Proc Soc Exp Biol Med 1999, V221, P281 CAPLUS
(6) Bradham, C; Am J Physiol 1998, V275, PG387 CAPLUS
(7) Chihara, G; Cancer Res 1970, V30, P2776 CAPLUS
(8) Fruehauf, J; Immunopharmacology 1982, V5, P65 CAPLUS
(9) Gillesby, B; Biochemistry 1997, V36, P6080 CAPLUS
(10) Itoh, H; Jpn J Pharmacol 1994, V66, P265 CAPLUS
(11) Kishimoto, T; Annu Rev Immunol 1988, V6, P485 CAPLUS
(12) Minato, K; Int J Medicinal Mushrooms 1999, V1, P265
(13) Mizuno, M; Biosci Biotechnol Biochem 1998, V62, P434 CAPLUS
(14) Morgan, E; Biochem Pharmacol 1993, V45, P415 CAPLUS
(15) Omura, T; J Biol Chem 1964, V230, P2379
(16) Paton, T; Biochem Pharmacol 1998, V55, P1791 CAPLUS
(17) Sang, H; Arch Biochem Biophys 1999, V363, P341 CAPLUS
(18) Shedlofsky, S; Biochem Pharmacol 2000, V59, P1295 CAPLUS
(19) Shiotani, B; Biosci Biotechnol Biochem 2002, V66, P356 CAPLUS
(20) Stadler, J; Proc Natl Acad Sci USA 1994, V91, P3559 CAPLUS
(21) Tian, Y; J Biol Chem 1999, V274, P510 CAPLUS
(22) Walter-Sack, I; Clin Pharmacokinet 1996, V31, P47 CAPLUS

REFERENCE 7

AN 138:133473 CA
TI Nucleic acid-separating agents
IN Kimura, Taro; Shinkai, Seiji; Sakurai, Kazuaki; Komoto, Kazuya; Mizuarai, Masami
PA Japan Science and Technology Corporation, Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G01N030-88
ICS B01D015-08; B01J020-24; C12N015-00; G01N030-48; G01N030-26; G01N030-30
CC 9-3 (Biochemical Methods)
Section cross-reference(s): 3
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003035704	A2	20030207	JP 2001-357095	20011122

PRAI JP 2001-69654 20010313

AB The agents for sepn. of helical polymers comprise .beta.-1,3-glucan derivs. or .beta.-1,3-xylan derivs. immobilized on supports. The helical polymers may be nucleic acids having helical parameters similar to those of .beta.-1,3-glucan or .beta.-1,3-xylan. An aq. soln. contg. Poly(A), Poly(U), Poly(G), and Poly(C) was passed through an affinity column contg. sizofiran supported on AF-Amino Toyopearl (amino group-contg. gel support). Poly(A) and Poly(C) were selectively retained on the gel column during elution with 30 mL of 50 mM phosphate buffer (pH 7.5) and was then eluted with 200 mM phosphate buffer (pH 6.0).

ST nucleic acid sepn affinity column glucan; xylan DNA RNA sepn affinity column; sizofiran gel affinity column DNA sepn

IT Affinity chromatographic stationary phases
Affinity chromatography
Immobilization, molecular
(gel-supported glucans or xylans for nucleic acid sepn.)

IT Silica gel, reactions
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(gel-supported glucans or xylans for nucleic acid sepn.)

IT DNA
Nucleic acids
RNA
mRNA
rRNA
tRNA
RL: PEP (Physical, engineering or chemical process); PUR (Purification or recovery); PYP (Physical process); PREP (Preparation); PROC (Process)
(gel-supported glucans or xylans for nucleic acid sepn.)

IT 9003-05-8, Polyacrylamide 9003-53-6, Polystyrene 9004-34-6, Cellulose, reactions 9008-22-4, Laminaran 9012-36-6, Agarose 9050-67-3, Sizofiran 9051-83-6, .beta.-1,3-Xylan 9051-97-2 37339-90-5, Lentinan 39464-87-4, Scleroglucan 54724-00-4, Curdlan 104074-36-4, Grifolan 121631-74-1, AF-Amino Toyopearl 493019-43-5, AF Carboxy Toyopearl

RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(gel-supported glucans or xylans for nucleic acid sepn.)
IT 24937-83-5P, Poly(A) 25191-14-4P, Poly(G) 27416-86-0P, Poly(U) 30811-80-4P, Poly(C)
RL: PEP (Physical, engineering or chemical process); PUR (Purification or recovery); PYP (Physical process); PREP (Preparation); PROC (Process)
(gel-supported glucans or xylans for nucleic acid sepn.)

REFERENCE 8

AN 138:130727 CA
TI Antitumor effects induced by the combination of TNP-470 as an angiogenesis inhibitor and lentinan as a biological response modifier in a rabbit spontaneous liver metastasis model
AU Sano, Bun; Sugiyama, Yasuyuki; Kunieda, Katsuyuki; Sano, Jun; Saji, Shigetoyo
CS Second Department of Surgery, Gifu University School of Medicine, Gifu, 500-8705, Japan
SO Surgery Today (2002), 32(6), 503-509
CODEN: SUTOE5; ISSN: 0941-1291
PB Springer-Verlag Tokyo
DT Journal
LA English
CC 1-6 (Pharmacology)
AB Purpose: An angiogenesis inhibitor, TNP-470 (TNP), has shown promising results in tumor dormancy therapy, and we have been studying its antitumor effects using a rabbit spontaneous liver metastasis model. However, because inhibition was obsd. only at the step of micrometastasis, we examd. the effects of combining TNP in the same model with a nonspecific immunopotentiator, lentinan (LNT), as a biol. response modifier. Methods: The model was established by the inoculation of VX-2 tumors into the colon, and colectomy was subsequently performed, including the primary tumor. Combination (TNP + LNT) effects were evaluated in terms of the no. and vol. of metastatic nodules, microvessel d. (MVD), expression of proliferating cell nuclear antigen (PCNA), and apoptosis, using immunohistochem. staining with anti-CD31, antiPCNA monoclonal antibody, and the TUNEL (in situ nick end-labeling) method, resp. Results: Angiogenesis was significantly inhibited in the TNP + LNT group, and the apoptotic index was also significantly higher than in the TNP or LNT groups. The pos. expression of PCNA in the VX2 cells was reduced in the LNT alone and TNP + LNT groups, but not in the TNP alone group. Conclusion: These findings indicate that TNP-470 and lentinan could prove useful for preventing the development of metachronous liver metastases from colorectal cancers after curative resection.
ST TNP 470 lentinan colorectal tumor liver metastasis
IT Angiogenesis inhibitors
(antitumor effects induced by the combination of TNP-470 as an angiogenesis inhibitor and lentinan as a biol. response modifier in a rabbit spontaneous liver metastasis model)
IT Intestine, neoplasm
(colorectal, metastasis to liver; antitumor effects induced by the combination of TNP-470 as an angiogenesis inhibitor and lentinan as a biol. response modifier in a rabbit spontaneous liver metastasis model)
IT Antitumor agents
(liver, metastasis; antitumor effects induced by the combination of TNP-470 as an angiogenesis inhibitor and lentinan as a biol. response modifier in a rabbit spontaneous liver metastasis model)
IT Liver, neoplasm
(metastasis; antitumor effects induced by the combination of TNP-470 as an angiogenesis inhibitor and lentinan as a biol. response modifier in a rabbit spontaneous liver metastasis model)
IT 37339-90-5, Lentinan 129298-91-5, TNP-470
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antitumor effects induced by the combination of TNP-470 as an angiogenesis inhibitor and lentinan as a biol. response modifier in a rabbit spontaneous liver metastasis model)
RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
(1) Antoine, N; Am J Pathol 1996, V148, P393 CAPLUS
(2) Antoine, N; Cancer Res 1994, V54, P2073 CAPLUS
(3) Boehm, T; Nature 1997, V390, P404 CAPLUS
(4) Braybrooke, J; Clin Cancer Res 2000, V6, P4697 CAPLUS
(5) Chihara, G; Dev Biol Stand 1992, V77, P191 MEDLINE
(6) Chihara, G; Nature 1969, V222, P687 CAPLUS
(7) Folkman, J; Ann Surg 1972, V175, P409 MEDLINE
(8) Folkman, J; N Engl J Med 1971, V285, P1182 MEDLINE

(9) Hofmagen, L; Nat Med 1995, V1, P149
(10) Ingber, D; Nature 1990, V348, P555 CAPLUS
(11) Itoshima, T; Biotherapy 1998, V12, P643
(12) Kashitsuka, T; Acta Schol Med Univ Gifu 1994, V42, P468
(13) Kato, T; Cancer Res 1994, V54, P5143 CAPLUS
(14) Kerr, J; Br J Cancer 1972, V26, P239 MEDLINE
(15) Kruger, E; Expert Opin Invest Durgs 2000, V9, P1383 CAPLUS
(16) Macaulay, V; Clin Cancer Res 1999, V5, P513 CAPLUS
(17) Maeda, Y; Nature 1974, V252, P250 CAPLUS
(18) Ninomiya, Y; Biotherapy 1997, V11, P1251
(19) Ohkubo, T; Biotherapy 1991, V5, P225
(20) Qian, C; Ann Otol Rhinol Laryngol 2000, V109, P641 MEDLINE
(21) Rous, P; J Exp Med 1952, V96, P159
(22) Sano, J; Surg Today 2000, V30, P1100 CAPLUS
(23) Sasaki, T; Gann 1976, V67, P191 CAPLUS
(24) Shishido, T; Jpn J Cancer Res 1998, V89, P963 CAPLUS
(25) Suga, T; Int J Immunopharmacol 1986, V8, P691 CAPLUS
(26) Tabuchi, Y; J Surg Res 1991, V50, P216 MEDLINE
(27) Takahama, Y; Science 1992, V258, P1456 CAPLUS
(28) Toi, M; Int J Oncol 1993, V3, P525 CAPLUS
(29) Ueoka, M; Jpn J Gastroenterol Surg 1999, V32, P983
(30) Zakany, J; Int J Cancer 1980, V26, P783 CAPLUS

REFERENCE 9

AN 138:66329 CA
TI Effects of lentinan on nitric oxide production and intracellular glutathione in mouse peritoneal macrophages
AU Hou, Gan; Huang, Dinan; Zhu, Qifeng
CS Institute of Biochemistry and Molecular Biology, Guangdong Medial College, Zhanjiang, 524023, Peop. Rep. China
SO Zhongcaoyao (2002), 33(3), 245-247
CODEN: CTYAD8; ISSN: 0253-2670
PB Zhongcaoyao Zazhi Bianjibu
DT Journal
LA Chinese
CC 1-7 (Pharmacology)
AB The mechanism of lentinan (LTN) activating mouse peritoneal macrophages to produce nitric oxide (NO) was studied. The effects of LTN on NO output and intracellular glutathione in mouse peritoneal macrophages and correlation of them were studied. The prodn. of NO in mouse peritoneal macrophages was significantly increased by LTN, and level of intracellular GSH was decreased as increase of NO prodn. The above effect can be blocked efficiently by NO prodn. inhibitors. NO prodn. can be inhibited by GSH-lowering drugs. LTN can increase NO prodn. with depletion of intracellular GSH in the activated mouse peritoneal macrophages. It was suggested that intracellular GSH played an important role in regulation of NO prodn. and protection of host cells from cytotoxic attack induced by NO.
ST lentinan cytoprotectant macrophage nitric oxide glutathione
IT Cytoprotective agents
(effects of lentinan on nitric oxide prodn. and intracellular glutathione in mouse peritoneal macrophages)
IT Peritoneum
(macrophage; effects of lentinan on nitric oxide prodn. and intracellular glutathione in mouse peritoneal macrophages)
IT Macrophage
(peritoneal; effects of lentinan on nitric oxide prodn. and intracellular glutathione in mouse peritoneal macrophages)
IT 70-18-8, Glutathione, biological studies 10102-43-9, Nitric oxide, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(effects of lentinan on nitric oxide prodn. and intracellular glutathione in mouse peritoneal macrophages)
IT 37339-90-5, Lentinan
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effects of lentinan on nitric oxide prodn. and intracellular glutathione in mouse peritoneal macrophages)

REFERENCE 10

AN 138:8403 CA
TI Crosslinked elastin and process for producing the same
IN Miyamoto, Keiichi
PA Japan
SO PCT Int. Appl., 54 pp.

CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM C08H001-06
ICS C08L089-06; A61L027-22
CC 63-7 (Pharmaceuticals)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002096978	A1	20021205	WO 2002-JP5275	20020530

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI JP 2001-163505 20010530

AB Disclosed are crosslinked elastin; a water sol. crosslinking agent to be used in the crosslinking; molded elastin articles; medical instruments and regeneration tissues using the crosslinked elastin; and a surgical therapy and a regeneration therapy with the use of these medical instruments. Thus, a biocompatible functional material having an elasticity appropriate for vital transplantation without causing release of cell-adhesive proteins is provided.

ST crosslinked elastin biocompatible prosthetic

IT Prosthetic materials and Prosthetics
(implants; prosthetic materials and medical goods made of crosslinked elastins and functional substances)

IT Medical goods
(prosthetic materials and medical goods made of crosslinked elastins and functional substances)

IT Caseins, biological studies
Ciliary neurotrophic factor
Collagens, biological studies
Elastins
Fibrins
Fibronectins
Fluoropolymers, biological studies
Gelatins, biological studies
Keratins
Laminins
Polyesters, biological studies
Polyoxyalkylenes, biological studies
Polysiloxanes, biological studies
Polyurethanes, biological studies
Sericins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prosthetic materials and medical goods made of crosslinked elastins and functional substances)

IT Polysaccharides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(soy; prosthetic materials and medical goods made of crosslinked elastins and functional substances)

IT Transforming growth factors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.alpha.-; prosthetic materials and medical goods made of crosslinked elastins and functional substances)

IT 821-38-5, 1,12-Dodecanedicarboxylic acid 32279-04-2, 4-Hydroxyphenyldimethylsulfonium methyl sulfate
RL: RCT (Reactant); RACT (Reactant or reagent)
(prosthetic materials and medical goods made of crosslinked elastins and functional substances)

IT 476628-71-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prosthetic materials and medical goods made of crosslinked elastins and functional substances)

IT 1398-61-4, Chitin 9000-01-5, Arabic gum 9000-07-1, Carrageenan 9000-36-6, Karaya gum 9000-65-1, Traganth gum 9002-04-4, Thrombin 9002-18-0, Agar 9002-84-0, Polytetrafluoroethylene 9002-88-4, Polyethylene 9002-89-5, Polyvinyl alcohol 9003-07-0, Polypropylene 9004-32-4, Sodium CMC 9004-34-6, Cellulose, biological studies 9004-54-0, Dextran, biological studies 9004-61-9, Hyaluronic acid

9004-67-5, Methyl cellulose 9005-25-8, Starch, biological studies
9005-32-7, Alginic acid 9041-49-6, Heparin, biological stud
9007-27-6, Chondroitin 9007-28-7, Chondroitin sulfate 9011-14-7,
Poly(methyl methacrylate) 9012-76-4, Chitosan 9016-00-6,
Polydimethylsiloxane 9032-43-3, Cellulose sulfate 9042-14-2, Dextran
sulfate 9057-02-7, Pullulan 11078-30-1, Galactomannan 11078-31-2,
Glucomannan 11138-66-2, Xanthan gum 24967-94-0, Dermatan sulfate
24980-41-4, Polycaprolactone 24991-23-9 25038-59-9, Polyethylene
terephthalate, biological studies 25104-18-1, Polylysine 25190-06-1,
Polytetramethylene glycol 25248-42-4, Polycaprolactone 25249-06-3,
Polygalacturonic acid 25322-68-3, Polyethylene glycol 25322-69-4,
Polypropylene glycol 25513-46-6, Polyglutamic acid 26023-30-3,
Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid
31900-57-9, Dimethylsilanediol homopolymer 37294-28-3, Xyloglucan
37339-90-5, Lentinan 38000-06-5, Polylysine 52519-63-8, Carboxymethyl
chitin 54724-00-4, Curdlan 62229-50-9, Epidermal growth factor
71010-52-1, Gellan gum 71010-52-1D, Gellan gum, sulfated 78644-42-5,
Polymalic acid 78666-19-0, Polymalic acid sru 106096-93-9, Basic FGF
127464-60-2, Vascular endothelial growth factor
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prosthetic materials and medical goods made of crosslinked elastins
and functional substances)
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
(1) Sumitomo Bakelite Co Ltd; JP 08-33661 A 1996 CAPLUS
(2) Sumitomo Bakelite Co Ltd; JP 09-173361 A 1997 CAPLUS

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	10.09	10.30
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-0.62	-0.62

STN INTERNATIONAL LOGOFF AT 10:27:12 ON 12 JUL 2003